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Attorneys for the Plaintiff TrackThings LLC

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

TRACKTHINGS LLC,

Plaintiff,

v.

NETGEAR, INC.,

Defendant.

Civil Action No. 21-cv-5440

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

TrackThings LLC (“TrackThings”) hereby asserts claims against NETGEAR, Inc. (“NETGEAR”) for infringement of U.S. Patent Nos. 9,642,017 (“the ’017 patent”), 9,332,442 (“the ’442 patent”), and 10,107,893 (“the ’893 patent”; collectively “the Patents-in-Suit”). In support thereof, TrackThings alleges as follows:

I. THE PARTIES

1. Plaintiff TrackThings is a New Jersey limited liability company with its principal place of business at 62 Burlington Road, Murray Hill, New Jersey 07974. TrackThings is the owner of the Patents-in-Suit, including the right to sue for past infringement.

2. Defendant NETGEAR is a Delaware corporation with its principal place of business at 350 East Plumeria Drive, San Jose, California 95134. On information and belief, NETGEAR conducts and has conducted business operations within the Southern District of New York, including through its offices at 625 Broadway, 11th Floor, New York, NY 10012.

II. JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 271 and 281, *et seq.*

4. Subject matter jurisdiction is proper pursuant to 28 U.S.C. §§ 1331 and 1338.

5. This Court has personal jurisdiction over NETGEAR in this action. NETGEAR has committed acts within the Southern District of New York giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over NETGEAR would not offend traditional notions of fair play and substantial justice. In particular, NETGEAR, directly and/or through subsidiaries or intermediaries (including distributors, retailers, and others), has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the Patents-in-Suit, as described herein. Moreover, NETGEAR has employees, offices and facilities in the Southern District of New York, demonstrated by (a) NETGEAR's website stating that "NETGEAR's Americas presence also includes offices in New York City..." (*see* <https://www.netgear.com/about/careers/>) (accessed June 17, 2021) and (b) the listing of New York, NY as a searchable location for job openings on NETGEAR's website (*see* <https://phh.taleo.net/phh02/ats/careers/v2/jobSearch?act=redirectCwsV2&cws=38&org=NETGEAR>) (accessed June 17, 2021).

6. Venue is proper in this district under 28 U.S.C. §§ 1391(b)-(d) and 1400(b). NETGEAR has committed acts of direct and indirect infringement in the Southern District of New

York. On information and belief, NETGEAR maintains a regular and established place of business in the Southern District of New York, including at least an office at 625 Broadway, 11th Floor, New York, NY 10012, as well as employees located in New York City. For example, NETGEAR's website states that "NETGEAR's Americas presence also includes offices in New York City..." (see <https://www.netgear.com/about/careers/>) (accessed June 17, 2021), and NETGEAR lists New York, NY as a searchable location for job openings on its website (see <https://phh.tbe.taleo.net/phh02/ats/careers/v2/jobSearch?act=redirectCwsV2&cws=38&org=NETGEAR>) (accessed June 17, 2021).

III. PATENTS IN SUIT

7. The '017 patent, entitled "APPARATUS AND METHOD FOR IMPROVING THE INTEGRITY AND PERFORMANCE OF AN AD-HOC WIRELESS NETWORK," was lawfully issued by the United States Patent and Trademark Office on May 2, 2017. A true and correct copy of the '017 patent is attached as **Exhibit A**.

8. The '017 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

9. TrackThings is the owner, by assignment, of the '017 patent, including the right to sue for past infringement.

10. The '442 patent, entitled "APPARATUS AND METHOD OF A CONFIGURABLE NETWORK," was lawfully issued by the United States Patent and Trademark Office on May 3, 2016. A true and correct copy of the '442 patent is attached as **Exhibit B**.

11. The '442 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

12. TrackThings is the owner, by assignment, of the '442 patent, including the right to sue for past infringement.

13. The '893 patent, entitled "APPARATUS AND METHOD TO AUTOMATICALLY SET A MASTER-SLAVE MONITORING SYSTEM," was lawfully issued by the United States Patent and Trademark Office on October 23, 2018. A true and correct copy of the '893 patent is attached as **Exhibit C**.

14. The '893 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

15. TrackThings is the owner, by assignment, of the '893 patent, including the right to sue for past infringement.

IV. FACTUAL ALLEGATIONS

Introduction

16. Thaddeus Gabara is the sole inventor of all three Patents-in-Suit. Mr. Gabara is a life-long engineer and innovator, and is listed as an inventor on over 120 patents. After a multi-decade career at AT&T Bell Laboratories and Bell Labs Research, Mr. Gabara founded TrackThings as a technology incubator to continue to innovate as an entrepreneur in various technical fields including networking, audio and signal processing, mobile, and wireless technology.

17. TrackThings owns over a dozen of Mr. Gabara's patents, and has been involved in partnering and licensing activities to promote the commercialization and use of these inventions. TrackThings overtly publishes and discloses its patents and their relevant technology, including but not limited to the Patents-in-Suit, on, e.g., its website located at www.trackthings.tech. To the extent necessary, TrackThings has complied with all requirement of 35 U.S.C. § 287 at all relevant times for each of the Patents-in-Suit.

18. The three Patents-in-Suit are related to wireless networking technology that allows devices (such as computers, smartphones, televisions, printers, etc.) in environments such as

homes or small offices¹ to wirelessly communicate with each other and to wirelessly access the internet. In particular, the patented inventions are used in, and are critically important to, wireless systems called “mesh WiFi” systems, including mesh WiFi systems manufactured and sold by NETGEAR.

19. In a traditional home networking system without a mesh WiFi system, a wireless router typically provides internet access for all of the devices within the home. One issue with this arrangement is that a traditional router has limited reach or coverage and may leave “dead zones” within a home. Although these routers could be combined with “range extenders,” these range extenders cause bandwidth issues and other complications for users. For example, range extenders function as a distinct network, use at least half of the available data bandwidth to communicate back to the original WiFi network, and require a user to disconnect from one network and switch to the other when moving throughout a home.

20. Mesh WiFi systems rely on multiple wireless nodes, connected to each other, to form an integrated WiFi network often distributed throughout a home or a small office. Typically, one node is an edge router connected to the internet, and the other satellites are spread out throughout the network. The edge router and satellites work together to form a single, integrated network.

21. Mesh WiFi systems improve upon traditional systems to greatly increase the overall reach of a single, integrated network. As compared to a traditional wireless router, mesh technology enables more efficient WiFi systems with extended coverage to better reach all areas

¹ Although this Complaint references use of the patented technology in homes or references “home networking systems,” such language is not intended to be limiting. The technology claimed in the Patents-in-Suit can be used in various environments such as homes, offices, and other venues.

of a home. For these reasons, mesh WiFi is significantly superior to range extenders and has emerged as the preferred solution for whole-home connectivity.

22. Mr. Gabara's inventions disclosed and claimed in the Patents-in-Suit cover three fundamental pillars for commercially successful mesh WiFi systems.

23. The '017 patent generally relates to methods and systems for optimally placing and connecting new nodes into a wireless network using a distributed computational unit that measures link integrity within the network. The claims of the '017 patent cover specific improvements in mesh networking technology that go beyond what is well-understood, routine, and conventional in the field of art.

24. The '442 patent generally relates to using multiple, differentiated radios to manage network communications and connected devices simultaneously. The claims of the '442 patent cover specific improvements in mesh networking technology that go beyond what is well-understood, routine, and conventional in the field of art.

25. The '893 patent generally relates to dynamically reconfiguring and rerouting networks using bidirectional links to improve performance. The claims of the '893 patent cover specific improvements in mesh networking technology that go beyond what is well-understood, routine, and conventional in the field of art.

26. As described in more detail below, NETGEAR's mesh WiFi systems infringe all three Patents-in-Suit.

The Accused Products and NETGEAR's Infringement

27. NETGEAR has developed, manufactured, used, sold, and/or offered for sale in the United States, and/or imported into the United States, and continues to develop, manufacture, use, sell, and/or offer for sale in the United States, and/or import into the United States, at least the following products: Orbi AC1200 Mesh WiFi System, Orbi AC1200 WiFi Satellite, Orbi AX1800

WiFi Mesh System, Orbi AX1800 Add-On Satellite, Orbi AX1800 WiFi Mesh Router, Orbi AX1800 WiFi Mesh Satellite, Orbi AC2200 Mesh WiFi System, Orbi AC2200 WiFi Cable Modem Router, Orbi AC2200 WiFi Satellite, Orbi AC2200 Mesh Router, Orbi AC2200 Voice & Mesh WiFi Extender, Orbi AC2200 LTE Mesh Router, Orbi AC3000 Mesh WiFi System, Orbi AC3000 Mesh WiFi System+Smart Speaker, Orbi AC3000 WiFi Satellite, Orbi AC3000 Mesh WiFi Range Extender, Orbi AX4200 WiFi Mesh System, Orbi AX4200 WiFi Satellite, Orbi AX4200 WiFi Cable Modem Router, Orbi AX5700 WiFi Mesh System, Orbi AX6000 WiFi Mesh System, Orbi AX6000 WiFi Satellite, Orbi AX6000 WiFi Mesh Router, Orbi Pro WiFi 5, Orbi Pro WiFi 6, and combinations thereof (collectively “Orbi Mesh Products”).

28. NETGEAR has developed, manufactured, used, sold, and/or offered for sale in the United States, and/or imported into the United States, and continues to develop, manufacture, use, sell, and/or offer for sale in the United States, and/or import into the United States, at least the following products: Nighthawk AX1800 Mesh WiFi System, Nighthawk AX1800 Add-On Satellite, Nighthawk AX3600 Mesh WiFi System, Nighthawk AX3600 Add-On Satellite, and combinations thereof (collectively “Nighthawk Mesh Products”).

29. The Orbi Mesh Products, Nighthawk Mesh Products, and other products offered by NETGEAR with similar capabilities as the aforementioned products that are covered by one or more claims of the ’017, ’442, and/or ’893 patents are collectively referred to as the “Accused Products”.

30. On information and belief, NETGEAR sells, offers for sale, and operates multiple products and services for use with the Accused Products, including but not limited to products and services marketed as Netgear Armor, Netgear Smart parental Controls, Meural, Netgear Insight and Netgear Prosupport, as well as the Netgear Orbi App and the Netgear Nighthawk App. On

information and belief, the sales revenue from these and other such products and services is driven by and dependent on the use and sale of the Accused Products.

31. NETGEAR has made, used, sold, offered to sell and/or imported infringing products, including the Accused Products, in the United States, and continues to do so.

32. By doing so, NETGEAR has directly infringed, and continues to directly infringe, the Patents-in-Suit.

33. NETGEAR has engaged and continues to engage in a pattern of conduct intended to induce and contribute to the infringement of others, such as its customers and users.

34. Through its actions, NETGEAR induces and contributes to the infringement of the Patents-in-Suit, and thus indirectly infringes the Patents-in-Suit.

35. There is an actual, substantial, and continuing justiciable controversy between TrackThings and NETGEAR regarding NETGEAR's infringement of the Patents-in-Suit. Absent a judgment and injunction from this Court, NETGEAR will continue to infringe the Patents-in-Suit and continue to cause damage and irreparable harm to TrackThings.

36. Despite being aware of or having knowledge of the Patents-in-Suit, including by way of TrackThings's overt publication of the Patents-in-Suit and their potential uses, and in any event through the filing of this Complaint or shortly thereafter, and the value and benefits of TrackThings's patented technology, NETGEAR engaged, and continues to engage, in behavior that they knew or should have known had a high likelihood of infringing the Patents-in-Suit, including by using TrackThings's patents technology in the Accused Products.

37. NETGEAR's infringement is willful. NETGEAR continues to commit acts of infringement despite a high likelihood that its actions constitute infringement, and NETGEAR knew or should have known that its actions constituted an unjustifiably high risk of infringement.

38. NETGEAR's acts of infringement have been willful as of the date it became aware of the patented technology/invention(s) and/or the Patents-in-Suit, and in any event no later than the filing of this Complaint for patent infringement and/or the date this Complaint for patent infringement was served on NETGEAR.

V. COUNT ONE – (Infringement of U.S. Patent No. 9,642,017)

39. TrackThings realleges and incorporates by reference each of the preceding paragraphs, as if fully set forth herein.

40. NETGEAR has and continues to directly and/or indirectly infringe one or more claims of the '017 patent in this District and elsewhere in New York and the United States.

41. Claim 1 of the '017 patent, for example, covers:

An ad-hoc wireless network comprising:

at least one client;

a plurality of relays each in a known location; and

a computational unit distributed within the ad-hoc network measuring a link integrity of each link in the ad-hoc wireless network; whereby

the computational unit determines a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network.

42. The Accused Products are ad-hoc wireless networks that connect hardware and software clients to the internet and that require a smartphone or computer connected to the network with the NETGEAR Orbi – WiFi System App and/or NETGEAR Nighthawk – WiFi Router App and/or NETGEAR Insight App and/or one of NETGEAR's web portals (collectively "the NETGEAR Apps").

43. The ad-hoc wireless networks of the Accused Products have relays each at a known location. For example, the Accused Products include routers and satellites with known locations.

44. The Accused Products maintain a physical location name (e.g., “living room,” “basement,” “office,” etc.) and a network location (e.g., connections to other relays) for each relay in the network.

45. On information and belief, the Accused Products have a computational unit distributed within the ad-hoc network that measures a link integrity of each link in the network. For example, the Accused Products have distributed components within their network—including the NETGEAR Apps for network setup and management—which record access point locations, determine link connectivity, toggle daisy-chain and star topologies, and direct the addition of new access points as discussed below, among other functions.

46. The computational unit of the Accused Products measures and displays the strength of connection between relays as evidenced, by, e.g., the use of color coding to show the strength of network connections. For example, the NETGEAR Apps use color coding to show the strength of network connections within the ad hoc wireless network. Additionally, the computational unit of the Accused Products determines a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network. For example, the NETGEAR Apps give recommendations for the placement of new satellites (e.g., based on the size of a home), detect the addition of new relays and instruct users to use LED visual displays on the units to aid in fine-placement adjustments (e.g., “[a]fter you find a general area for your Orbi Satellite, the Satellite’s ring LED colors tell you if it’s too far from your Orbi Router.”). (*See* <https://kb.netgear.com/31029/Where-should-I-place-my-Orbi-satellite>) (accessed June 17, 2021).

47. On information and belief, the technology used by the Accused Products regarding placement of satellites in a mesh network infringes the ’017 patent.

48. For at least these reasons, NETGEAR, by itself and/or through its subsidiaries, agents, and/or business partners, has directly infringed, literally or under the doctrine of equivalents, claims of the '017 patent pursuant to 35 U.S.C. § 271(a) by making, having made, using, selling, offering for sale, and/or importing systems and methods protected thereby including the Accused Products, within the United States and within this district.

49. NETGEAR also directly infringes the method claims of the '017 patent because any steps of those claims performed by users of the Accused Products are attributable to NETGEAR such that NETGEAR is liable for direct infringement under 35 USC § 271(a).

50. The benefits of the Accused Products are conditioned on the performance of certain steps identified by NETGEAR, and users operate the Accused Products under the instructions and directions prescribed by NETGEAR. For example, in order to obtain the benefits of the Accused Products, e.g. seamless whole-home WiFi coverage, NETGEAR requires users to install, use and maintain the Accused Products in a manner NETGEAR prescribes, including the requirement that users either install the NETGEAR App or visit the appropriate web portal, to use and operate the Accused Products. NETGEAR maintains significant direction and control over the Accused Products and the actions of its users through such mechanisms.

51. For example, in order to use the NETGEAR App, which is required to use the Accused Products, NETGEAR requires users at least to accept NETGEAR's terms and conditions, allow NETGEAR to have access to the user's local networks, allow NETGEAR to find and connect to devices on the user's local networks, and create a NETGEAR account thereby providing personal information to NETGEAR. (*See, e.g., <https://www.youtube.com/watch?v=s1UJPCanvr4>*). NETGEAR then provides step-by-step installation instructions, including requiring users to create a WiFi network and upgrade to the

latest firmware in order to use the Accused Products. (*See Id.*) During the setup process, the NETGEAR App also requests further access to the users' mobile devices (e.g., face recognition access, camera access, push notifications, etc.).

52. NETGEAR also provides instructions and directions to users online. For example, the Accused Products' webpages include product information and links to Installation Guides, User Manuals, and/or Product Datasheets. These documents instruct users how to, e.g., set-up a wireless network using the Accused Products, change that network's settings, and view network data. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021). NETGEAR provides further instructions and directions to users on its broader website, netgear.com, and other third-party platforms such as YouTube.com.

53. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has induced and continues to induce the direct infringement of the '017 patent by users of the Accused Products pursuant to 35 U.S.C. § 271(b) in the United States and within this District.

54. For example, NETGEAR induced and continues to induce the direct infringement of the '017 patent by users of the Accused Products by selling or otherwise providing users the Accused Products. For example, NETGEAR lists Accused Products for sale on its website at least at the following URLs: <https://www.netgear.com/home/wifi/mesh/> (accessed June 17, 2021); <https://www.netgear.com/business/wifi/mesh/> (accessed June 17, 2021). The Accused Products are designed and intended to enable users to perform each component and step of the patented systems and methods of the '017 patent.

55. As an additional example, NETGEAR induced and continues to induce the direct infringement of the '017 patent by users of the Accused Products by providing instructions and

directions to users regarding the use of the Accused Products. For example, NETGEAR provides instructions and directions to users including but not limited to information on the product webpages, links from the product webpages to other internal and external webpages, and links on the product webpages to download Installation Guides, User Manuals, and Product Datasheets, all of which set forth instructions and manuals describing, *e.g.* how to set-up the Accused Products, how to change settings to the network of the Accused Products, and how to view network data from the network of the Accused Products. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021). NETGEAR provides further instructions and directions to users on its broader website, netgear.com, and other third party platforms such as YouTube.com.

56. As a further example, NETGEAR induced and continues to induce the direct infringement of the '017 patent by users of the Accused Products by providing software updates to the Accused Products, which are designed and intended to enable users to perform or continue to perform each component and step of the patented systems and methods of the '017 patent. For example, NETGEAR instructs its users as to how to upgrade the firmware of the Accused Products, and in some cases requires users to upgrade the firmware of the Accused Products. (*See, e.g.,* <https://kb.netgear.com/000058278/How-do-I-update-the-firmware-of-my-Orbi-WiFi-System>) (accessed June 17, 2021). For example, NETGEAR pushes new versions of its app to its users' mobile devices. (*See, e.g.,* <https://apps.apple.com/us/app/netgear-orbi/id1182184397>) (accessed June 17, 2021).

57. On information and belief, NETGEAR has had actual knowledge of the '017 patent prior to, and at least as of, the filing of this Complaint. On information and belief, NETGEAR has

engaged in these activities with knowledge and intent that such activities would cause and/or encourage direct infringement of the '017 patent.

58. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has contributed, and continues to contribute, to the direct infringement by users of the Accused Products of claims of the '017 patent (including, without limitation, the claims addressed above) pursuant to 35 U.S.C. § 271(c) in the United States and within this District at least by providing the Accused Products, which are designed and intended to enable users of the Accused Products to use and perform each component and step of the patented systems and methods of the '017 patent, including installing and operating a mesh WiFi system as described herein, knowing that the Accused Products are a material part of the claimed inventions, are especially made or especially adapted for use in infringing the patented systems and methods, and are not staple articles or commodities of commerce for substantial non-infringing use.

59. As a consequence of NETGEAR's infringement, both literal and under the doctrine of equivalents, of the '017 patent, TrackThings has been damaged in an amount not yet determined and is entitled to recover damages pursuant to 35 U.S.C. § 284.

60. On information and belief, NETGEAR's infringement of the '017 patent has been and continues to be willful.

VI. COUNT TWO – (Infringement of U.S. Patent No. 9,332,442)

61. TrackThings realleges and incorporates by reference each of the preceding paragraphs, as if fully set forth herein.

62. NETGEAR has and continues to directly and/or indirectly infringe one or more claims of the '442 patent in this District and elsewhere in New York and the United States.

63. Claim 1 of the '442 patent, for example, covers:

A configurable network comprising:

at least one relay, each relay containing a plurality of software radios;

a plurality of streams of bits each partitioned into a plurality of portions;

an input stream of bits from the Internet received by a first relay;

the first relay transmitting an output stream of bits to the Internet;

a plurality of cell phones coupled to the first relay;

a first software radio in the first relay configured to pass a first portion of the input stream of bits received from the Internet as a first portion of a first stream of bits transmitted to a first cell phone;

the first software radio configured to pass a first portion of a second stream of bits received from the first cell phone as a first portion of the output stream of bits transmitted to the Internet;

the first software radio configured to transfer a second portion of the input stream of bits received from the Internet to a second software radio in the first relay, the second software radio configured to transmit the second portion of the input stream of bits as a first portion of a third stream of bits to a second cell phone; and

the second software radio configured to transfer a first portion of a fourth stream of bits received from the second cell phone to the first software radio, the first software radio configured to transmit the first portion of the fourth stream as a second portion of the output stream of bits to the Internet.

64. The Accused Products are configurable networks with relays, where each relay has a plurality of software radios. For example, the Accused Products can be dual-band systems or tri-band systems.

65. On information and belief, the configurable network of the Accused Products enables a first relay to (i) transmit portions of streams of bits between the internet and a first cellphone through a first software radio, and (ii) transmit portions of streams of bits between the internet and a second cell phone through the first software radio and a second software radio. For example, the Accused Products indicate that a client (e.g., a cellphone) is connected to a particular

software radio in a particular router or satellite in the network and thus is connected to, and communicating with, to the internet through that software radio.

66. On information and belief, the Accused Products use one frequency band as a dedicated backhaul to connect satellites to each other and to the edge router. In a satellite, one software radio (a first software radio) is used for communications to/from the edge router, i.e., for the input streams and output streams to and from the internet.

67. Additionally, each satellite uses multiple software radios/bands to communicate with client devices. For example, a first software radio in a satellite can send data between the internet and a first device (e.g., a first cell phone). A second software radio in that satellite that is in communication with a second device (e.g., a second cell phone) reaches the internet via connection to the first software radio.

68. On information and belief, the technology used by the Accused Products to transmit and receive portions of streams of bits between the internet and multiple devices (e.g., a first and second cell phone) infringes the '442 patent.

69. For at least these reasons, NETGEAR, by itself and/or through its subsidiaries, agents, and/or business partners, has directly infringed, literally or under the doctrine of equivalents, claims of the '442 patent pursuant to 35 U.S.C. § 271(a) by making, having made, using, selling, offering for sale, and/or importing systems and methods protected thereby including the Accused Products, within the United States and within this district.

70. NETGEAR also directly infringes the method claims of the '442 patent because any steps of those claims performed by users of the Accused Products are attributable to NETGEAR such that NETGEAR is liable for direct infringement under 35 USC § 271(a).

71. The benefits of the Accused Products are conditioned on the performance of certain steps identified by NETGEAR, and users operate the Accused Products under the instructions and directions prescribed by NETGEAR. For example, in order to obtain the benefits of the Accused Products, e.g. seamless whole-home WiFi coverage, NETGEAR requires users to install, use and maintain the Accused Products in a manner NETGEAR prescribes, including the requirement that users either install the NETGEAR App or visit the appropriate web portal, to use and operate the Accused Products. NETGEAR maintains significant direction and control over the Accused Products and the actions of its users through such mechanisms.

72. For example, in order to use the NETGEAR App, which is required to use the Accused Products, NETGEAR requires users at least to accept NETGEAR's terms and conditions, allow NETGEAR to have access to the user's local networks, allow NETGEAR to find and connect to devices on the user's local networks, and create a NETGEAR account thereby providing personal information to NETGEAR. (*See, e.g.,* <https://www.youtube.com/watch?v=s1UJPCanvr4>). NETGEAR then provides step-by-step installation instructions, including requiring users to create a WiFi network and upgrade to the latest firmware in order to use the Accused Products. (*See Id.*) During the setup process, the NETGEAR App also requests further access to the users' mobile devices (e.g., face recognition access, camera access, push notifications, etc.).

73. NETGEAR also provides instructions and directions to users online. For example, the Accused Products' webpages include product information and links to Installation Guides, User Manuals, and/or Product Datasheets. These documents instruct users how to, e.g., set-up a wireless network using the Accused Products, change that network's settings, and view network data. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021).

NETGEAR provides further instructions and directions to users on its broader website, netgear.com, and other third-party platforms such as YouTube.com.

74. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has induced and continues to induce the direct infringement of the '442 patent by users of the Accused Products pursuant to 35 U.S.C. § 271(b) in the United States and within this District.

75. For example, NETGEAR induced and continues to induce the direct infringement of the '442 patent by users of the Accused Products by selling or otherwise providing users the Accused Products. For example, NETGEAR lists Accused Products for sale on its website at least at the following URLs: <https://www.netgear.com/home/wifi/mesh/> (accessed June 17, 2021); <https://www.netgear.com/business/wifi/mesh/> (accessed June 17, 2021). The Accused Products are designed and intended to enable users to perform each component and step of the patented systems and methods of the '442 patent.

76. As an additional example, NETGEAR induced and continues to induce the direct infringement of the '442 patent by users of the Accused Products by providing instructions and directions to users regarding the use of the Accused Products. For example, NETGEAR provides instructions and directions to users including but not limited to information on the product webpages, links from the product webpages to other internal and external webpages, and links on the product webpages to download Installation Guides, User Manuals, and Product Datasheets, all of which set forth instructions and manuals describing, *e.g.* how to set-up the Accused Products, how to change settings to the network of the Accused Products, and how to view network data from the network of the Accused Products. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021). NETGEAR provides

further instructions and directions to users on its broader website, netgear.com, and other third party platforms such as YouTube.com.

77. As a further example, NETGEAR induced and continues to induce the direct infringement of the '442 patent by users of the Accused Products by providing software updates to the Accused Products, which are designed and intended to enable users to perform or continue to perform each component and step of the patented systems and methods of the '442 patent. For example, NETGEAR instructs its users as to how to upgrade the firmware of the Accused Products, and in some cases requires users to upgrade the firmware of the Accused Products. (*See, e.g.,* <https://kb.netgear.com/000058278/How-do-I-update-the-firmware-of-my-Orbi-WiFi-System>) (accessed June 17, 2021). For example, NETGEAR pushes new versions of its app to its users' mobile devices. (*See, e.g.,* <https://apps.apple.com/us/app/netgear-orbi/id1182184397>) (accessed June 17, 2021).

78. On information and belief, NETGEAR has had actual knowledge of the '442 patent prior to, and at least as of, the filing of this Complaint. On information and belief, NETGEAR has engaged in these activities with knowledge and intent that such activities would cause and/or encourage direct infringement of the '442 patent.

79. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has contributed, and continues to contribute, to the direct infringement by users of the Accused Products of claims of the '442 patent (including, without limitation, the claims addressed above) pursuant to 35 U.S.C. § 271(c) in the United States and within this District at least by providing the Accused Products, which are designed and intended to enable users of the Accused Products to use and perform each component and step of the patented systems and methods of the '442 patent, including installing and operating a mesh WiFi system as described

herein, knowing that the Accused Products are a material part of the claimed inventions, are especially made or especially adapted for use in infringing the patented systems and methods, and are not staple articles or commodities of commerce for substantial non-infringing use.

80. As a consequence of NETGEAR's infringement, both literal and under the doctrine of equivalents, of the '442 patent, TrackThings has been damaged in an amount not yet determined and is entitled to recover damages pursuant to 35 U.S.C. § 284.

81. On information and belief, NETGEAR's infringement of the '442 patent has been and continues to be willful.

VII. COUNT THREE – (Infringement of U.S. Patent No. 10,107,893)

82. TrackThings realleges and incorporates by reference each of the preceding paragraphs, as if fully set forth herein.

83. NETGEAR has and continues to directly and/or indirectly infringe one or more claims of the '893 patent in this District and elsewhere in New York and the United States.

84. Claim 1 of the '893 patent, for example, covers:

An intelligent network comprising:

a first node of a plurality of nodes assigned as a master node;

all remaining nodes of said plurality of nodes assigned as slave nodes;

said master node coupled by a direct bidirectional link to each one of said slave nodes, wherein

each said slave node exclusively communicates information with another slave node through said master node;

one of said slave nodes assigned by said intelligent network as a current master node;

said first node assigned by said intelligent network as a new slave node; and

said current master node coupled by a new direct bidirectional link to each of said slave nodes.

85. The Accused Products are intelligent networks comprising a first node of a plurality of nodes assigned as a master node and all remaining nodes of said plurality of nodes assigned as slave nodes.

86. The intelligent network of the Accused Products can use multiple topologies to connect satellites and an edge router (all “nodes”) using bidirectional links. On information and belief, when the Accused Products are installed with one edge router and two satellites (as one example), they can be configured in only one of a star topology or a daisy-chain topology at a given time.

87. A daisy-chain topology is where, for example, a first satellite (the “master node”) is connected to both a second satellite and the edge router (both “slave nodes”), whereby the second satellite and the edge router communicate with each other through the first satellite; and a star topology is where, for example, each satellite (now the “slave nodes”) connects to the edge router (now the “master node”), and the two satellites communicate with each other through the edge router. (See <https://kb.netgear.com/000048458/What-is-daisy-chain-and-how-does-it-work-with-my-Orbi-WiFi-System>).

88. When the Accused Products are in the daisy-chain topology, the middle satellite is the master node through which the other satellite and the edge router, the slave nodes, exclusively communicate.

89. When the Accused Products are in the star topology, the two satellites are the slave nodes and the edge router is the master node through which the slave nodes exclusively communicate.

90. On information and belief, the intelligent network of the Accused Products can dynamically reconfigure between star and daisy-chain topologies, whereby one of said slave nodes of the Accused Products is then assigned by said intelligent network as a current master node and said first node is assigned by said intelligent network as a new slave node.

91. When switching from daisy-chain to star topology, the edge router, one of said slave nodes, is assigned by said intelligent network as a current master node and the middle satellite, said first node, is assigned by said intelligent network as a new slave node. When switching from star to daisy-chain topology, the middle satellite, one of said slave nodes, is assigned by said intelligent network as a current master node and the edge router, said first node, is assigned by said intelligent network as a new slave node.

92. On information and belief, the Accused Products' implementation of star and daisy-chain topologies, and the Accused Products' dynamic reconfiguration between one topology and another infringes the '893 patent.

93. For at least these reasons, NETGEAR, by itself and/or through its subsidiaries, agents, and/or business partners, has directly infringed, literally or under the doctrine of equivalents, claims of the '893 patent pursuant to 35 U.S.C. § 271(a) by making, having made, using, selling, offering for sale, and/or importing systems protected thereby including the Accused Products, within the United States and within this district.

94. The benefits of the Accused Products are conditioned on the performance of certain steps identified by NETGEAR, and users operate the Accused Products under the instructions and directions prescribed by NETGEAR. For example, in order to obtain the benefits of the Accused Products, e.g. seamless whole-home WiFi coverage, NETGEAR requires users to install, use and maintain the Accused Products in a manner NETGEAR prescribes, including the requirement that

users either install the NETGEAR App or visit the appropriate web portal, to use and operate the Accused Products. NETGEAR maintains significant direction and control over the Accused Products and the actions of its users through such mechanisms.

95. For example, in order to use the NETGEAR App, which is required to use the Accused Products, NETGEAR requires users at least to accept NETGEAR's terms and conditions, allow NETGEAR to have access to the user's local networks, allow NETGEAR to find and connect to devices on the user's local networks, and create a NETGEAR account thereby providing personal information to NETGEAR. (*See, e.g.,* <https://www.youtube.com/watch?v=s1UJPCanvr4>). NETGEAR then provides step-by-step installation instructions, including requiring users to create a WiFi network and upgrade to the latest firmware in order to use the Accused Products. (*See Id.*) During the setup process, the NETGEAR App also requests further access to the users' mobile devices (e.g., face recognition access, camera access, push notifications, etc.).

96. NETGEAR also provides instructions and directions to users online. For example, the Accused Products' webpages include product information and links to Installation Guides, User Manuals, and/or Product Datasheets. These documents instruct users how to, e.g., set-up a wireless network using the Accused Products, change that network's settings, and view network data. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021). NETGEAR provides further instructions and directions to users on its broader website, netgear.com, and other third-party platforms such as YouTube.com.

97. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has induced and continues to induce the direct infringement of the '893 patent

by users of the Accused Products pursuant to 35 U.S.C. § 271(b) in the United States and within this District.

98. For example, NETGEAR induced and continues to induce the direct infringement of the '893 patent by users of the Accused Products by selling or otherwise providing users the Accused Products. For example, NETGEAR lists Accused Products for sale on its website at least at the following URLs: <https://www.netgear.com/home/wifi/mesh/> (accessed June 17, 2021); <https://www.netgear.com/business/wifi/mesh/> (accessed June 17, 2021). The Accused Products are designed and intended to enable users to perform each component of the patented systems of the '893 patent.

99. As an additional example, NETGEAR induced and continues to induce the direct infringement of the '893 patent by users of the Accused Products by providing instructions and directions to users regarding the use of the Accused Products. For example, NETGEAR provides instructions and directions to users including but not limited to information on the product webpages, links from the product webpages to other internal and external webpages, and links on the product webpages to download Installation Guides, User Manuals, and Product Datasheets, all of which set forth instructions and manuals describing, *e.g.* how to set-up the Accused Products, how to change settings to the network of the Accused Products, and how to view network data from the network of the Accused Products. (*See, e.g.,* <https://www.netgear.com/home/wifi/mesh/rbk53/>) (accessed June 17, 2021). NETGEAR provides further instructions and directions to users on its broader website, netgear.com, and other third party platforms such as YouTube.com.

100. As a further example, NETGEAR induced and continues to induce the direct infringement of the '893 patent by users of the Accused Products by providing software updates

to the Accused Products, which are designed and intended to enable users to perform or continue to perform each component of the patented systems of the '893 patent. For example, NETGEAR instructs its users as to how to upgrade the firmware of the Accused Products, and in some cases requires users to upgrade the firmware of the Accused Products. (*See, e.g.,* <https://kb.netgear.com/000058278/How-do-I-update-the-firmware-of-my-Orbi-WiFi-System>) (accessed June 17, 2021). For example, NETGEAR pushes new versions of its app to its users' mobile devices. (*See, e.g.,* <https://apps.apple.com/us/app/netgear-orbi/id1182184397>) (accessed June 17, 2021).

101. On information and belief, NETGEAR has had actual knowledge of the '893 patent prior to, and at least as of, the filing of this Complaint. On information and belief, NETGEAR has engaged in these activities with knowledge and intent that such activities would cause and/or encourage direct infringement of the '893 patent.

102. NETGEAR, by itself and/or through its subsidiaries, affiliates, agents, and/or business partners, has contributed, and continues to contribute, to the direct infringement by users of the Accused Products of claims of the '893 patent (including, without limitation, the claims addressed above) pursuant to 35 U.S.C. § 271(c) in the United States and within this District at least by providing the Accused Products, which are designed and intended to enable users of the Accused Products to use and perform each component of the patented systems of the '893 patent, including installing and operating a mesh WiFi system as described herein, knowing that the Accused Products are a material part of the claimed inventions, are especially made or especially adapted for use in infringing the patented systems, and are not staple articles or commodities of commerce for substantial non-infringing use.

103. As a consequence of NETGEAR's infringement, both literal and under the doctrine of equivalents, of the '893 patent, TrackThings has been damaged in an amount not yet determined and is entitled to recover damages pursuant to 35 U.S.C. § 284.

104. On information and belief, NETGEAR's infringement of the '893 patent has been and continues to be willful.

JURY DEMAND

105. TrackThings requests a trial by jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, TrackThings respectfully requests that the Court enter judgment against NETGEAR:

A. determining that NETGEAR has infringed, and continues to infringe, one or more claims of the '017 patent;

B. ordering NETGEAR to account for and pay to TrackThings all damages suffered by TrackThings as a consequence of NETGEAR's infringement of the '017 patent, together with pre and post judgment interest and costs as fixed by the Court;

C. ordering NETGEAR to account for and pay to TrackThings all ongoing royalties for NETGEAR's continuing infringement of the '017 patent;

D. ordering a permanent injunction prohibiting NETGEAR from further acts of infringement of the '017 patent;

E. declaring that NETGEAR's infringement of the '017 patent was and is willful and trebling TrackThings's damages under U.S.C. § 284 on that ground;

F. determining that NETGEAR has infringed, and continues to infringe, one or more claims of the '442 patent;

G. ordering NETGEAR to account for and pay to TrackThings all damages suffered by TrackThings as a consequence of NETGEAR's infringement of the '442 patent, together with pre and post judgment interest and costs as fixed by the Court;

H. ordering NETGEAR to account for and pay to TrackThings all ongoing royalties for NETGEAR's continuing infringement of the '442 patent;

I. ordering a permanent injunction prohibiting NETGEAR from further acts of infringement of the '442 patent;

J. declaring that NETGEAR's infringement of the '442 patent was and is willful and trebling TrackThings's damages under U.S.C. § 284 on that ground;

K. determining that NETGEAR has infringed, and continues to infringe, one or more claims of the '893 patent;

L. ordering NETGEAR to account for and pay to TrackThings all damages suffered by TrackThings as a consequence of NETGEAR's infringement of the '893 patent, together with pre and post judgment interest and costs as fixed by the Court;

M. ordering NETGEAR to account for and pay to TrackThings all ongoing royalties for NETGEAR's continuing infringement of the '893 patent;

N. ordering a permanent injunction prohibiting NETGEAR from further acts of infringement of the '893 patent;

O. declaring that NETGEAR's infringement of the '893 patent was and is willful and trebling TrackThings's damages under U.S.C. § 284 on that ground;

P. declaring that this case is exceptional and awarding TrackThings its costs and attorneys' fees in accordance with 35 U.S.C. § 285; and

Q. granting TrackThings such other and further relief as the Court may deem just and proper.

Dated: New York, New York
June 21, 2021

Respectfully submitted,

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